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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/784,776

02/24/2004

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EXAMINER

KHAN, USMAN A

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

10/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/784,776

Applicant(s)

FUKUDA ET AL.

Examiner

Usman Khan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004 and 29 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 3-9 and 13-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,10-12 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of species 1 pertaining to claims 1, 2, 10 – 12, and 16 - 22 in the reply filed on 8/29/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 004/05/2006 and 05/26/2004 have been considered by the examiner. The submissions are in compliance with the provisions of 37 CFR 1.97.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 – 2, 10 – 12, 16 – 18, and 20 - 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu et al. (US PgPub 2002/0041239).

Regarding **claim 1**, Shimizu et al. teaches a shooting device (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera), comprising: a shooting unit which shoots an object (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); an expected shooting state storing unit which stores expected shooting state information which represents an expected shooting state of the object (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position, also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); a guide determining unit which determines how the object is to be guided based on the expected shooting state information and an image shot by said shooting unit (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means; camera shooting the surrounding

i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); a guide instruction outputting unit which instructs how the object is to be guided based on a result of the determination made by said guide determining unit (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); and an image outputting unit which outputs the image shot by said shooting unit (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means using display i.e. paragraphs 0016 *et seq.*; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position).

Regarding **claim 2**, as mentioned above in the discussion of claim 1, Shimizu et al. teaches all of the limitations of the parent claim. Additionally, Shimizu et al. teaches that the expected shooting state information includes information which represents an expected position of the object; and said guide determining unit determines a direction where the object is to be guided (paragraphs 0109 *et seq.* and figures 1 *et seq.*,

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trajectory to the target parking position and expected trajectory with notifying means using display i.e. paragraphs 0016 *et seq.*; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position).

Regarding **claim 10**, as mentioned above in the discussion of claim 1, Shimizu et al. teaches all of the limitations of the parent claim. Additionally, Shimizu et al. teaches that the said image-outputting unit outputs the image shot by said shooting unit if said guide-determining unit determines that the object is not required to be guided (paragraph 0109; parking aid and mode on/off switch; and when off just an image behind a vehicle is taken).

Regarding **claim 11**, as mentioned above in the discussion of claim 1, Shimizu et al. teaches all of the limitations of the parent claim. Additionally, Shimizu et al. teaches that the object possesses a certain pattern (figures 3 – 35, target parking position location and size/shape i.e. pattern); an amount of a pattern to be shot by said shooting unit is defined as the expected shooting state information (figures 3 – 35 and paragraphs 0016 *et seq.*, target parking position location and size/shape i.e. pattern displayed on the monitor); and said guide determining unit determines that the object is not required to be guided (figure 10 item S6, if speed greater then threshold then no guide determined; also if S3 is not activated the process is terminated; also in figure 22

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if item S14' OR S12 produce a positive output then the guide process is terminated), if the amount of the pattern, which is detected from the image of the object shot by said shooting unit, is larger than the amount of the pattern, which is defined as the expected shooting state information (figure 10 item S6, if speed greater then threshold then no guide determined; also if S3 is not activated the process is terminated; also in figure 22 if item S14' OR S12 produce a positive output then the guide process is terminated).

Regarding **claim 12**, Shimizu et al. teaches a shooting device (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera), comprising: a shooting unit which shoots an object (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 - 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position) in a particular color (paragraphs 0022 - 0023, 0045, and 0159; display color can be changed); a detecting unit which detects a proportion of the image in the particular color to a whole of an image shot by said shooting unit (paragraphs 0022 - 0023, 0045, and 0159; display color can be changed and the driver can easily recognize the notified content by looking at the color of the display); a guide instruction outputting unit which instructs a direction where the object is to be guided based on a result of detection made by said detecting unit (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking

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position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); and an image outputting unit which outputs the image shot by said shooting unit (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means using display i.e. paragraphs 0016 *et seq.*; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position).

Regarding **claim 16**, as mentioned above in the discussion of claim 1, Shimizu et al. teaches all of the limitations of the parent claim. Additionally, Shimizu et al. teaches that the said guide instruction outputting unit comprises a display unit, and displays a character string corresponding to the result of the determination made by said guide determining unit, on said display unit (paragraphs 0024 *et seq.* character string being displayed on the display).

Regarding **claim 17**, as mentioned above in the discussion of claim 1, Shimizu et al. teaches all of the limitations of the parent claim. Additionally, Shimizu et al. teaches that the said guide instruction outputting unit comprises a display unit (figure 2 item 8), **and displays a graphic or a symbol** corresponding to the result of the determination made by said guide determining unit, on said display unit (figure 2 item 8 and figures 4 *et seq.* expected trajectory displayed on display; paragraphs 0109 *et seq.* and figures 1

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et seq., trajectory to the target parking position and expected trajectory with notifying means.

Regarding **claim 18**, as mentioned above in the discussion of claim 1, Shimizu et al. teaches all of the limitations of the parent claim. Additionally, Shimizu et al. teaches that the said guide instruction outputting unit outputs voice guidance corresponding to the result of the determination made by said guide determining unit (paragraph 0018 – 0019, 0040 – 0041, 0110 and 0123; notifying means notifies the driver using sound).

Regarding **claim 20**, Shimizu et al. teaches a method guiding an object (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position, also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position) to be shot with a shooting device (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera), comprising: shooting an object with a shooting device (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera); determining how the object is to be guided based on expected shooting state information which represents an expected shooting state of the object, and an image shot by the shooting device (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an

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expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); and outputting a guide instruction of how the object is to be guided based on a result of the determination (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means using display i.e. paragraphs 0016 *et seq.*; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position).

Regarding **claim 21**, Shimizu *et al.* teaches a method of shooting an object (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position) with a shooting device (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera), comprising: a first step of shooting an object with a shooting device (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera); a second step of determining how the object is to be guided based on expected shooting state information which represents an expected shooting state of the object, and an image shot by the shooting device (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying

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means; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); a third step of outputting a guide instruction of how the object is to be guided based on a result of the determination; and a fourth step of repeating the first through the third steps until it is determined that the object is not required to be guided (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means using display i.e. paragraphs 0016 *et seq.*; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position).

Regarding **claim 22**, Shimizu et al. teaches a shooting device (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera), comprising: shooting means for shooting an object (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); storing means for storing expected shooting state information which represents an expected shooting state of the object (paragraphs 0109, 0136 and figures 1 - 2 item 7; camera storing an expected parking position to be used through out the parking process also figures 3 –

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35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); guide determining means for determining how the object is to be guided based on the expected shooting state information and an image shot by said shooting means (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); guide instruction outputting means for instructing how the object is to be guided based on a result of the determination made by said guide determining means (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position); and image outputting means for outputting the image shot by said shooting means (paragraphs 0109 *et seq.* and figures 1 *et seq.*, trajectory to the target parking position and expected trajectory with notifying means using display i.e. paragraphs 0016 *et seq.*; camera shooting the surrounding i.e. target parking position, the subject vehicle position, and an expected parking position also figures 3 – 35 and paragraphs 0008 *et seq.* target parking position, the subject vehicle position, and an expected parking position).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (US PgPub 2002/0041239) in further view of Examiners Official Notice.

Regarding **claim 19**, as mentioned above in the discussion of claim 1, Shimizu et al. teaches all of the limitations of the parent claim. Additionally, Shimizu et al. teaches that the said guide instruction-outputting unit generates sound corresponding to the result of the determination made by said guide determining unit (paragraph 0018 – 0019, 0040 – 0041, 0110 and 0123; notifying means notifies the driver using sound).

However, Shimizu et al. fails to teach that the said guide instruction-outputting unit generates stereophonic sound corresponding to the result of the determination made by said guide determining unit. The examiner takes Official Notice that it is old and well known to use stereophonic sound in an audio system.

Therefor, one of ordinary skill in the art at the time the invention was made would have found it obvious to use stereophonic sound in an audio system in Shimizu et al. invention of to create a pleasant and natural impression of sound heard from various directions, as in natural hearing.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kuragaki et al. (US patent No. 6,768,417) teaches object position and expected guiding.

Smith et al. (US patent No. 6,281,806) teaches object position and expected guiding.

Czekaj (US patent No. 5,742,141) teaches object position and expected guiding.

Ouchi et al. (US PgPub 2001/0041618) teaches object position and expected guiding.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

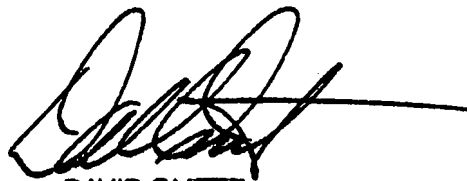
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Usman Khan
09/26/2007
Patent Examiner
Art Unit 2622



DAVID OMETZ
SUPERVISORY PATENT EXAMINER